



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,551	01/22/2002	Ralf Dohmen	2-3-4-2-2-2	7258

7590 04/08/2005

Docket Administrator (Room 3J-219)  
Lucent Technologies Inc.  
101 Crawfords Corner Road  
Holmdel, NJ 07733-3030

EXAMINER

WONG, LINDA

ART UNIT	PAPER NUMBER
----------	--------------

2634

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/054,551

Applicant(s)

DOHMEN ET AL.

Examiner

Linda Wong

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Within the information disclosure statement, the document number 39901 is incorrect and cannot be found within the US patent document database. An appropriate document number for this reference should be provided.

### ***Claim Objections***

2. **Claim 1** is objected to because of the following informalities:
  - a. **Claim 1, line 19**, recites an "equilizing parameter". Equalizing is spelled incorrectly.  
  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1 – 5** are rejected under 35 U.S.C 112, 2<sup>nd</sup> paragraph, as being indefinite.  
  
Due to the misnumbering of the claims, the independent and dependent claims cannot be determined.

Due to the 35 USC 112 rejection on claims 1 –5, it is assumed that the claims are numbered from 1 – 8. The claims are numbered as followed:

1. "A method of adjusting equalization parameters in a receiver comprising ... changing the predetermined equalizing parameter until an optimum is reached. "
2. "The method of claim 1, for adjusting the threshold value of the receiver ... a look-up table or a circuit forming a look-up table."
3. "The method of claim 2 ... and is increasing when the previous bit is 1."
4. "The method of claim 1 wherein incoming data are converted into digital form ... adjustment of equalization parameter."
5. "A receiver adapted to adjust equalization parameters thereof, comprising ... the adaptation means (AD) has means for dithering parameters of the receiver."
6. "A receiver for adjusting the threshold value thereof, comprising ... the feedback loop ... amount and direction of the adjustment of the receiver threshold (th)."
7. "The receiver of claim 6 wherein the tap means (TM) include flip-flops (FF) for providing the value of the previous bit ... for the actual received data bit."
8. "The receiver of claim 6 wherein the tap means (TM) include flip-flops (FF) in series and gate circuits ... the summed numbers of the counters ... provides the adjustment value to the threshold decision circuit (TH)."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2634

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 1, 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US Application No.: 2005/0008070) and "Computer Communications" IEEE Vol. 2, No. 4, August 1979.
9. **Claim 1**, Wang et al discloses a method and apparatus for adjusting equalization parameters comprising an analog filter (page 8, paragraph [0086], label 852), a decision element comprising a clock recovery element (page 8, paragraph [0088], lines 4-7), an error correction means (page 8, paragraph [0089], label 864) and a controller (adaptation means) (page 8, paragraph [0086], label 856). Wang et al discloses a method of continuously measuring the bit error rate (error signal outputted from the FEC decoder) from a number of correct bits, changing a predetermined parameter to lower the bit error rate until a level is reached. (Fig. 8A and page 1, paragraph [0007]) Although Wang et al does not disclose a received data stream comprised of data blocks with an information and error correction section, IEEE published an article that describes a data packet comprised of data blocks containing information and error correction. (Fig. 11) It would be obvious to one skilled in the art to use a data stream comprised of information and error correction so to detection errors within the stream more easily.
10. **Claim 4** inherits all the limitations of claim 1.

~~5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al~~

(US Application No.: 2005/0008070) and "Computer Communications" IEEE Vol. 2, No. 4, August 1979 and further in view of Tan et al (US Patent No.: 6226323)

11. **Claim 5**, inherits all the limitations of claim 1. Although Wang et al and IEEE does not disclose a threshold decision circuit and a means for passing the digital data stream through the receiver, Tan et al discloses a slicer or threshold decision unit connected to a decision feedback filter comprised of shift registers or delay taps. (Fig. 14, labels 206 and 202 and Fig. 15) It would be obvious to one skilled in the art to connect that analog filter disclosed by Wang et al with an equalizer comprised of a threshold decision circuit and a means for passing digital data to provide correction to the bits found erroneous.

### ***Allowable Subject Matter***

6. **Claims 2, 3, 6, 7, 8** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome 35 U.S.C 112, 2<sup>nd</sup> paragraph rejections.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LW



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**